



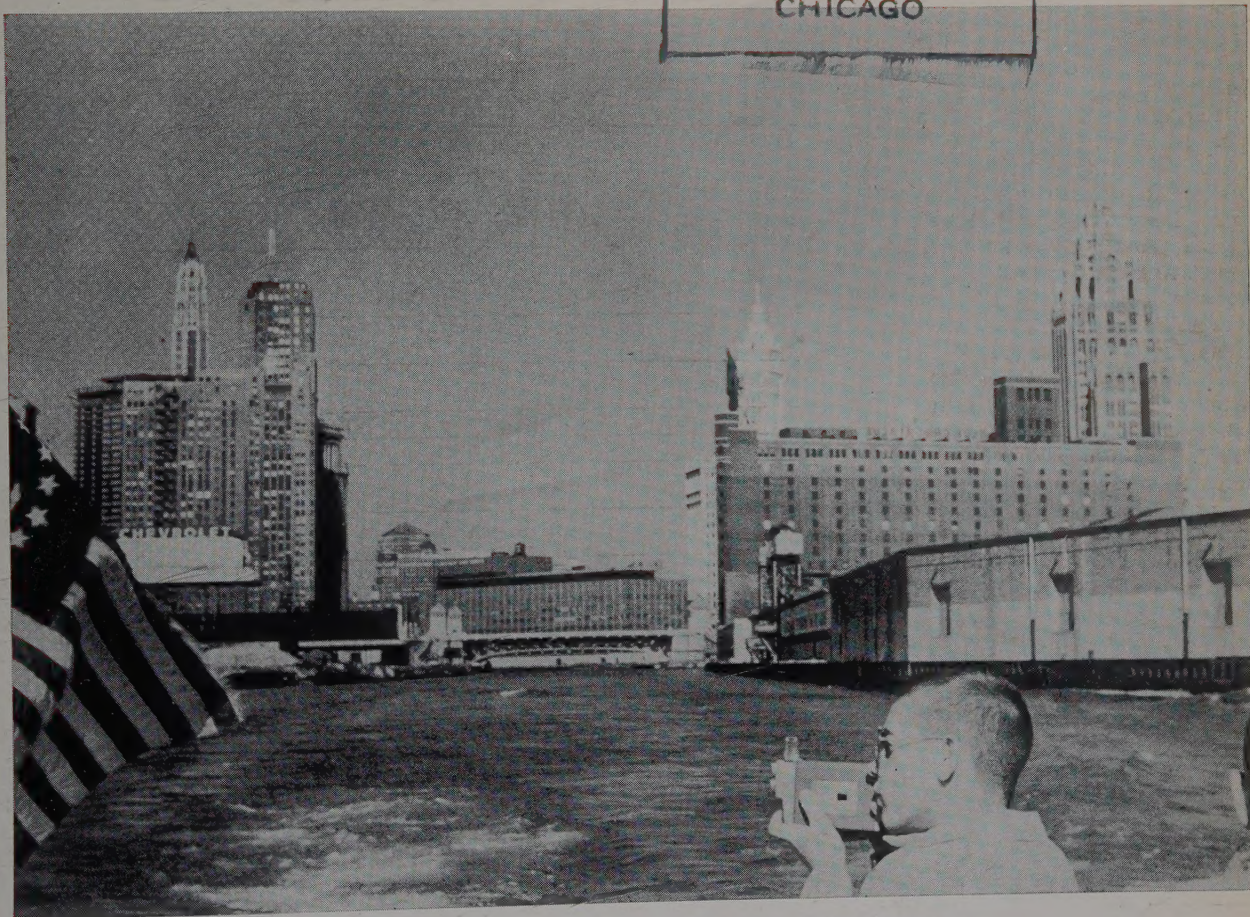
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Salt Creek Chapter tours Chicago waterfronts.

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JULY, 1960
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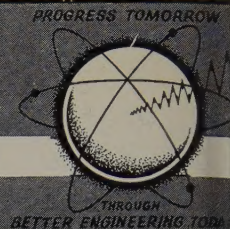
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INTROSPECTIVE REFLECTIONS

By H. F. SOMMERSCHIELD, P. E.,
Vice President, I.S.P.E.

The compensations of the engineer are varied and numerous. Those who have been in the profession for many years will attest to this statement. It is most rewarding to look back in retrospect and recall the problems encountered, the solutions devised and the help and cooperation of fellow engineers, enjoyed in the doing. This is a heritage.

There are many things which could have been done in the past which would have enhanced our profession today. They have been made evident by benefit of hindsight. The omissions of the past, however, cannot be changed so it is of no benefit to even entertain any thoughts pertaining to them.

Similarly, it is unwise to put off our plans to the future for whether or not the future will be available to us rests in the Grace of God. We may never enjoy the opportunity to make our plans if we delay. Our only concern for the future should be, whether or not the young men entering the profession today will be able to look back to our present efforts with enthusiasm. The prospect of future accomplishments depends upon our activity today.

We are creatures of time. The present is our most valuable possession. Today is the only usable segment of time. We had better appropriate it and use it wisely. This calls for serious introspection.

To determine the avenues we should pursue in our planning a definition of our desires is the first order of business. What do we really want professionally? The many polls which have been made and the areas being explored by our many engineering societies serve to reveal the desires of the majority of those in the profession.

First and foremost, we want the assurance of an opportunity for free expression. The right to maintain our autonomy. We want the opportunity to employ our skills to the benefit of mankind. This is the basic premise of our democratic way of life. We do not want regimentation, whether it be imposed by government, unionism, a hierarchy within our professional economy or by any other source.

We want to be able to practice our profession in an

amicable community—one in which we can work together with other engineers in unity of purpose. We do not want to maintain the status quo and we cannot tolerate retrogress.

We want to build a vibrant professional society—one possessing higher standards of ethics, higher standards of excellence and higher standards of professional conduct.

We want to enjoy the dignity which results from the respect of our fellow man. This we cannot *demand*. If, however, we are able to accomplish the foregoing desires we will *command* the respect of our neighbors.

To effect these desires is a man sized job. We must determine whether or not it is possible to accomplish them. We are living in a day of tremendous acceleration. Things happen today which we would have considered impossible a few years ago. Fabulous accomplishments are the order of the day. We, too, can realize the accomplishment of our desires if we are willing to give evidence of our faith by dedicated effort. These desires are not selfish, they are not Utopian, they are attainable. The engineer has proven his ability to keep pace, technically, with these cataclysmic developments. Why do we doubt our ability to keep pace professionally?

The Illinois Society of Professional Engineers has its work cut out for it. Great strides have been made in the past few years but there is much more work to be done.

We must accelerate our effort to unify our profession through the development of an organization which dignifies the autonomy of man. The ISPE and NSPE possess the characteristics through which such unity can be realized. To hasten the day when this will be true we must diligently pursue an effective membership campaign. Every effort to enlist the cooperation of all registered engineers should be made.

We must increase our activity to raise the ethical standards and professional conduct of the profession. Our program should include the militant policing of the profession. The respect of the public cannot be ex-

(Continued on Page 6)

CONTENTS FOR THIS ISSUE

Introspective Reflections	1
Engineers Take a Boat Trip.....	2
Senator Douglas Reports on Retirement Bill.....	2
Village Dismisses Quack Engineering Firm.....	3
Department of Registration and Education	
Exam Schedule.....	3
National Directors Report on NSPE Annual	
Meeting	4
North Shore Chapter Holds Panel on Ethics.....	5
1961 Convention Committees Names.....	6
Professional Corner	10
New Committee Created.....	13
Structural Engineers Report.....	14

ENGINEERS TAKE A BOAT TRIP

The June meeting of the Salt Creek Chapter was an interesting boat trip in and around the waterfronts of Chicago.

The Wendella left its dock near the Wrigley Building at 9:00 a.m. on Saturday, June 4, 1960, with 122 passengers aboard 68 of whom were I.S.P.E. members and the rest members of the Prairie Club who joined with the Chapter in this outing.



Chicago skyline, as seen from the clipper.

The first leg of the journey was down the river and out into Lake Michigan where the passengers got a very good view of the water intake cribs and the 79th Street Filtration plant. The next stretch was up the Calumet River to Lake Calumet, where several ocean vessels were in view. One item that was noticed was the change in the color of the water as the Wendella passed into Lake Calumet, it changed from blue to a dirty brown, evidence of the gross pollution in the lake from the surrounding steel mills. In view here was the tremendous harbor facilities of Lake Calumet including piers and warehouses. Then down the Little Calumet River, through the Blue Island Lock and out into the Chicago Drainage Canal. On the way they got a good view of the new Thomas J. O'Brian Lock now under construction. There is a good deal of construction under way in the Canal, it is being widened from 65 feet to 225 feet, much of it through solid rock. Also there are many marinas along the way. There is much evidence of tremendous building of warehouses, oil storage tanks, etc., along the canal. Also noticed both by eye and nose were the infamous Chicago Sanitary District sludge lagoons. Quipped one member, "They should have supplied clothespins for this stretch."

Presiding was Wayne Reed, President, and pointing out the interesting and historic sights was Howard Raynor, program chairman.

The Chicago Canal is to have a minimum depth of 9 feet, barely enough for some of the barges that travel it. The entire Chicago area is rapidly expanding its harbor facilities to handle the increased volume of traf-

SENATOR DOUGLAS REPORTS ON RETIREMENT BILL

The attention of engineers has turned again in recent weeks to H. R. 10, the Keogh-Simpson bill. Illinois Senator Paul Douglas has been serving as Chairman of the Joint Economic Committee reviewing this proposed Federal legislation. ISPE and NSPE have consequently expressed the desire that he favor reasonable legislation that would allow retirement provisions for engineers who are self-employed. Because corporation and even some government agency retirement contributions (administration, etc.) are tax free, this bill has attempted to provide a measure of equalization for private business operations, such as engineering.

Douglas Replies to ISPE

"Thank you for your letter asking me to support H. R. 10, the Keogh-Simpson bill.

"This bill would in essence exempt contributions up to \$2500 a year which self-employed professional men and business executives might make to private insurance organizations for annuities after the age of 65 which, in turn, would be taxable.

"There is a strong argument for the adoption of this bill on the ground that contributions which corporations make for (1) annuity plans for executives and (2) fringe benefits including annuity payments and premiums for employees can be deducted as business expenses and hence are not subject to taxation.

"It is therefore urged that a reciprocal privilege should be extended to self-employed professions, etc., who should be granted similar conditions. It should be noted, however, that the three and one-quarter percent contributions on earnings up to \$4800 a year which those under social security make are not exempt from taxation, nor are the 6½ percent contributions made under

(Continued on Page 12)



Time out for refreshments aboard lake cruiser.

fic, and this trip was an excellent opportunity to observe first hand some of these expansions.

The last leg of the journey was up the Canal through the Chicago River and back to the dock at 3:00 p.m. The coffee and soft drinks just barely held out, and no one got sea sick even from the sludge lagoons.

VILLAGE DISMISSES QUACK ENGINEERING FIRM

The Village of Lisle, a suburb of Chicago, has dismissed the Thomas O. Miles, Jr., engineering firm from its proposed \$2,000,000 sewer and water main project after the village learned that Miles was not registered in the State. In fact, they found that he is not registered in any state.

The I.S.P.E., the Chicago, and the Salt Creek Chapters received a great deal of publicity in the west suburban papers and the *Chicago Tribune* for the part they played in bringing this case to light.

The Miles firm prepared a preliminary report to the Village of Lisle for which they were paid \$2500. Complaints about the quality of this report by the village and a complaint by an I.S.P.E. member to the Chicago Chapter about the man being unregistered, triggered the investigation. Since the Miles office and the Village of Lisle are in the Salt Creek area, the Ethics and Practice Committees of both chapters worked together in gathering evidence. On May 2, 1960, an informal hearing was held in the office of the Department of Registration and Education. By this time, Mr. Miles had incorporated his firm to do structural engineering work by bringing in Mitchell J. Alster, S. E., as an officer of the firm. Mr. Leo Lowitz, supervisor of complaints for the Department, informed Mr. Miles that he still was not properly incorporated to do professional engineering work. He further told him that he had been practicing illegally for over a year and that the contract with the Village of Lisle was illegal and that the village could probably recover their money if it was taken to court.

Many statements made by Miles at the hearing were proven false by the evidence gathered by the I.S.P.E. representatives. Mr. Miles claimed that no design work had been performed in preparing the preliminary report to the village. Upon questioning by the Chicago Chapter representatives, however, Mr. Miles admitted that plans were prepared and attached to the report indicating the proposed routing and sizing of the sewers and mains. The plans had been removed from the report submitted to the Department.

Mr. Miles stated during the hearing that he had never claimed to be a registered professional engineer. Upon questioning by Louis A. Bacon, chairman of Chicago Ethics and Practice Committee, Mr. Miles admitted that his firm's brochures state he is a registered professional engineer in the State of New Jersey. However, he stated that this registration had been dropped in 1953. Mr. Bacon then produced a typewritten resume, dated July 28, 1959, of the Miles firm which had been sent to the Village of Downers Grove. This document still listed Miles as registered in the State of New Jersey.

The *Chicago Tribune* article states that Leonard Bosgraf, Village Attorney for Lisle, said that the Village

would attempt to recover the \$2500 paid Miles for the preliminary report. He further stated that a court suit would be instituted if necessary.

The *Tribune* article also quotes Chester Cole, chairman of the Salt Creek Chapter Ethics and Practice Committee, as saying "This constitutes 'quackery'." The article then states that the reporter reached Miles in his LaGrange office and he laughed when he was told the Illinois Society had labeled him a "quack." "I was not operating illegally in any way," he asserted.

Mr. Cole further indicated that the two Chapters intend to file complaints against Miles. The counsel for the two Committees, Howard DePree, is quoted as saying that Miles would be charged with practicing and offering to practice engineering while unregistered.

The various resumes and brochures put out by Mr. Miles have all listed him as a graduate of the University of Tennessee with a B.S.C.E. About two weeks after the informal hearing, the Chicago Chapter received proof that the University of Tennessee has no record of Mr. Miles ever being registered in any course of study.

The two Ethics and Practice Committees are now in the process of filing criminal proceedings against this man. The *Illinois Engineer* will keep the membership apprised of the progress and outcome of this case which appears to be a very flagrant violation of our engineering registration Acts.

DEPARTMENT OF REGISTRATION AND EDUCATION EXAMINATION SCHEDULE

Remaining 1960 examinations for Professional Engineer, Structural Engineer, and Land Surveyor registration, scheduled by the Illinois Department of Registration and Education, are as follows:

	Final Filing Date	Examination Date
Professional Engineers	Sept. 19	Nov. 17, 18
(EIT only)	Oct. 17	Nov. 17
Structural Engineers	Sept. 9	Nov. 9, 10
Land Surveyor	Oct. 10	Oct. 26, 27, 28

Examinations for Professional Engineer, Structural Engineer, and Land Surveyor are conducted only in Chicago, while examination for Engineer-in-Training (first half of full Professional Engineer registration) is given at the University of Illinois and at the Illinois Institute of Technology regularly and at Northwestern University when the number of examinees warrants.

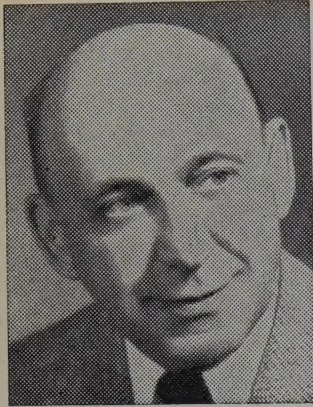
The I.S.P.E., in cooperation with the University of Illinois Extension Division, will assist in setting up refresher courses for the above-listed examinations in Chapter areas throughout the State. A minimum enrollment of fifteen persons is required to schedule the 11-week courses.

Chapters are urged to survey their members and to advise the ISPE office of any potential students as soon as possible.

NATIONAL DIRECTORS REPORT ON N.S.P.E. ANNUAL MEETING

One of the highlights of the Annual Meeting of the National Society of Professional Engineers held at Boston, June 6-11, 1960, was the admission of the two remaining states, namely, Kentucky and New Hampshire. The Society now has 53 Member State Societies, including all of the States of the United States, District of

Columbia, Puerto Rico and the Canal Zone.



M. E. Amstutz

The Student Chapter Committee gave a very fine report. Professor J. Neils Thompson of Texas, Chairman, and his Committee, urged Member State Societies to activate chapters in the various engineering schools and other schools offering courses in Engineering. At the Wichita meeting three levels of chapter development were authorized,

namely: Alpha Student Chapter—Accredited Colleges of Engineering; Beta Student Chapter—Colleges of Engineering have a curriculum of at least four years; Gamma Student Chapter—Colleges or Junior Colleges having a curriculum leading to an Engineering Degree; Delta Student Chapter—Colleges or Junior Colleges having a curriculum of at least two years duration preparatory for engineering courses in a school or college granting an Engineering Degree. The success of the Student Chapter Program will depend upon its implementation at the State and Chapter levels.

The Functional Section for Engineers in Government Practice through the leadership of Wesley Gilbertson, its Chairman, has become of vital interest to all engineers in government units. The new booklet—"Registration for the Engineer in Government Practice"—is very well written and should be of great value to engineers in public activities.

Various military service branches are becoming keenly interested in the registration of engineers under their Command. Hugh M. Milton II, Under Secretary of the Army, states "I think we can safely conclude that in the eyes of the public, the certificate of registration is the mark of the professional—it is the layman's assurance that you can be entrusted with the work involved in the practice of engineering." Lieutenant General E. C. Itschner, Chief of Engineers, U. S. Army, and himself a registered professional engineer, stated, "Even though professional registration is not a prerequisite for employment as an engineer by the corps . . . it is my policy to encourage registration and to foster it to the utmost." Major General A. M. Minton, Director of Civil Engineering in the Air Force, and a registered professional engineer states "We should encourage and

practically require every Air Force Engineer, who is eligible, to become a registered engineer." Rear Admiral E. J. Peltier, Chief of the Bureau of Yards and Docks, also a registered professional engineer, states, "I have been vitally concerned with the improvement of the professional status of Civil Engineer Corps officers. . . . One means of increased professional stature which I heartily endorse is active membership in professional societies. Professional engineering registration is another means." The Bureau of Public Roads, in a recent memorandum declared that: "Many states require that their engineers be licensed or registered. Although we cannot require our professional personnel to become licensed, we sincerely encourage all of them to do so. . . ."

The Functional Section is planning to issue a Monthly News Letter comprising from two to four pages covering various activities of Engineers in Government Practice somewhat similar in format to that presently issued by the Functional Section for Consultant Engineers.

The Functional Section Meeting at Boston was attended by not only high-ranking officers in the Military Service but also by many engineers from State Highway Departments, municipalities, counties and from the various Civil Service Branches of the U. S. Government. A very keen interest was shown in the fact that similar functional sections following the NSPE By-Laws are being established in many States. I believe consideration should be given to the creation of such a section in Illinois with the present Highway Functional Section being a subdivision thereof.

The importance of the NSPE annual meeting is indicated by the attendance of numerous outstanding persons in addition to the officers and directors of the society. For example, the chairman of the NSPE Board of Distinguished Consultants was present during most of the meeting. Top officials from government, industry, education and from our northern neighbor, Canada, were present. Representatives and officials from ASME, AIEE, AIME and ASCE attended Board sessions.

The new vice president for our central region is Ben Elliott, professor emeritus, University of Wisconsin. Noah Hull, vice president and general manager, Hughes Gun Company, Houston, is the new NSPE president.

During the preliminary festivities, Rodney Chip from International Telephone and Telegraph, and his wife, Beatrice Hicks, reported on their one-month goodwill tour to South America. You may recall they were selected for "project ambassador" in NSPE competition last year. They visited several countries, investigated major engineering projects, and conferred with numerous engineers during this tour. Their purpose was to promote good will and understanding between engineers of our two continents.

(Continued on Page 11)

NORTH SHORE CHAPTER HOLDS PANEL DISCUSSION ON ENGINEERING ETHICS

Engineer leaders of industrial, educational and consulting fields discussed wide aspects of how the engineering code of ethics applies to each of these fields at the May meeting of North Shore Chapter of I.S.P.E. Panelists were Donald L. Arenson, Assistant General Manager, Mechanics Research Division, American Machine and Foundry Company; Dr. John A. Logan, Chairman of the Civil Engineering Department, Northwestern University; and I.S.P.E. Past-President Frank Edwards, Manager, Chicago Office of Stanley Engineering Company.

Each panelist gave a discussion of the connotations of engineering ethics in his field and then a lively question-and-answer period was conducted by North Shore Chapter President W. F. O'Brien, Jr.



Left to right: D. L. Arenson, F. W. Edwards, John A. Logan and W. F. O'Brien, Jr.

The first speaker was Mr. Arenson and his talk was "Ethical Problems of Engineers in Industry." An engineer makes use of a great many sciences and the question of ethics is involved in a great many instances. A short definition of ethics by Webster calls it "a science of moral duty," or "the science of ideal human character."

Mr. Arenson pointed out that engineers don't often take the time to define moral ethics . . . that they don't cheat or steal or break laws in their professional dealings. To help him in the conduct of his business, the engineer uses the canons of ethics formulated by N.S.P.E. This governs his personal conduct very thoroughly. However, a conflict arises in the fact that the engineer in industry is engaged by a corporation that is in business to make money. Therefore, there are times when it appears that he may be called upon to compromise his professional standards to meet the company need. This, of course, is the question: "Must the engineer in industry sacrifice professional ethics in order to properly serve his employer?" "I don't think so," said Mr.

Arenson. "I believe that the engineer serves the public interest and his employer equally well in producing the best product that can be made from an economical and usable standpoint." Mr. Arenson based this opinion on the fact that the authority to make decisions is the right of the engineer, which other employees do not have. The engineer must use his "know how" and training to make these decisions, which are dependent upon the individual aptitudes and abilities required by his industry. Engineers in industry must act in professional matters in a responsible manner to best be faithful to his company. In effect, he is a trustee of the company and his loyalties and responsibilities are reflected in the company's attitude and treatment of him. As an example, the engineer cannot join a bargaining group and become a union man; but, whenever duties permit, he has certain privileges and freedoms that the other employees do not have. As the opportunity arises, he may even be able to take an afternoon off and play golf. These privileges and freedoms, however, are only evidences of a two-way responsibility. Not only is the engineer responsible to put out the best product he knows how, but also the company must provide a proper atmosphere of freedom for creative work.

One other question was posed by Mr. Arenson: "Is the engineer a part of management?" The answer to this is relatively simple and is determined by the fact that management's function is that of decision-making. Therefore, by his very nature, the decision-making engineer is a management man.

The next speaker was Dr. Logan and he discussed the "Professionalism of Educators." Dr. Logan started out by stating that he had thought a little bit of giving this talk from the point of view of what Northwestern University tries to tell the young engineering students on campus about engineering ethics. He said, however, that his final thought was that Northwestern does very little about engineering ethics or professionalism. This is because they just do not know what to tell the fledgling engineer about this problem. Dr. Logan referred them to the articles on professionalism from the *American Engineer* by Admiral Rickover. Admiral Rickover stated in that series of articles that a profession is based on the body of the background of knowledge used by that profession. However, an important thing, according to Admiral Rickover, is the manner of using this knowledge. The individual must feel an obligation to do something about the conduct of the profession. Another aspect is his freedom—freedom from clients and employers—to do the proper thing. Dr. Logan stated that we should go further than this. He said that we should try to understand why we are engineers as well as what the engineer does. Any of the dedicated members of a profession KNOW why they are practicing their profession; teachers know why they teach; theologians know; and doctors know. There is a question

1961 CONVENTION COMMITTEES NAMED

Chairmen of Convention Committees for 1961 have been named by Peoriarea Chapter, hosts for the 76th Annual Convention to be held in Peoria on April 20, 21 and 22, 1961.

The following men were selected:

General Chairman—E. J. Giebelhausen

Registration—Emmett Smith

Entertainment and Special Events—Lavern Swords

Publicity and Printing—Wilbur Dodge

Hotel and Food—Carl Schmidgall

Finance—Robert Harmeson

Headquarters for the Convention is the Pere Marquette Hotel.



Joliet Chapter honored its Past Presidents at a meeting just prior to ISPE's Annual Meeting in May, at which L. D. Hudson, ISPE Acting President at the time, was guest speaker. Shown above, left to right, W. S. Gray, National Director; W. T. Hooper, ISPE Vice President; L. D. Hudson, and James Gates, Joliet Chapter President.

CAPITAL CHAPTER MEMBERS HONORED BY LOCAL AMERICAN BUSINESS CLUB

R. D. Collins and Marcus J. Rice, both of Springfield, were elected Vice President and as a member of the Board of Governors, respectively, of the local chapter of the American Business Club this week. Their terms are for one year. The Springfield ABC is the largest chapter in the nation.

Both are members of the engineering firm of Hanson, Collins & Rice, and are members of Capital Chapter. Collins is treasurer of the I.S.P.E.

ISPE President LeVerne D. Hudson and Mrs. Hudson attended the 23rd Annual Convention of the Indiana Society of Professional Engineers, held June 24 and 25 at French Lick.

Our Society was honored to have the Indiana Society's then President-elect Robert E. Hutton and Mrs. Hutton as guests during Convention and Exposition week in Springfield in May.

(Continued from Page 1)

pected if we permit the quack and the charlatan to prey upon unsuspecting individuals.

We must expand our activity in the educational field to improve our excellence. This program should include the upgrading of curricula, the scrutiny of teaching personnel and an effort to initiate more instructions in the professional aspects of engineering. The teaching of applied engineering subjects and the professional aspects of engineering must be carried on by qualified Registered Professional Engineers. To further improve our excellence we should promote the participation of all engineers in the activity of their respective technical societies. We cannot hope to attain the high excellence of performance which we covet if we neglect these factors. We must develop strong functional groups within the framework of the society. These groups will provide immediate communications with specific segments of the profession. It is imperative that we be apprised of their thinking if we hope to properly represent all branches of the profession.

When, and only when, we can demonstrate accomplishments will we enjoy the general acceptance of our philosophy. There are many skeptics within our ranks who will get on the band wagon if we can demonstrate results. Nothing succeeds like success.

Up to this point we have confined our thoughts to the consideration of ISPE at the state level. Just what is ISPE? It is composed of twenty-two local chapters which serve almost 3500 individual members. The chapters are the window through which others view our activity. It is intensely important that each chapter recognize its responsibility to represent the society commendably. It is equally important that the individual member conduct himself in an unimpeachable manner for we are the ISPE. Ask yourself: What kind of a Society would ISPE be if all its members followed the example I have set?

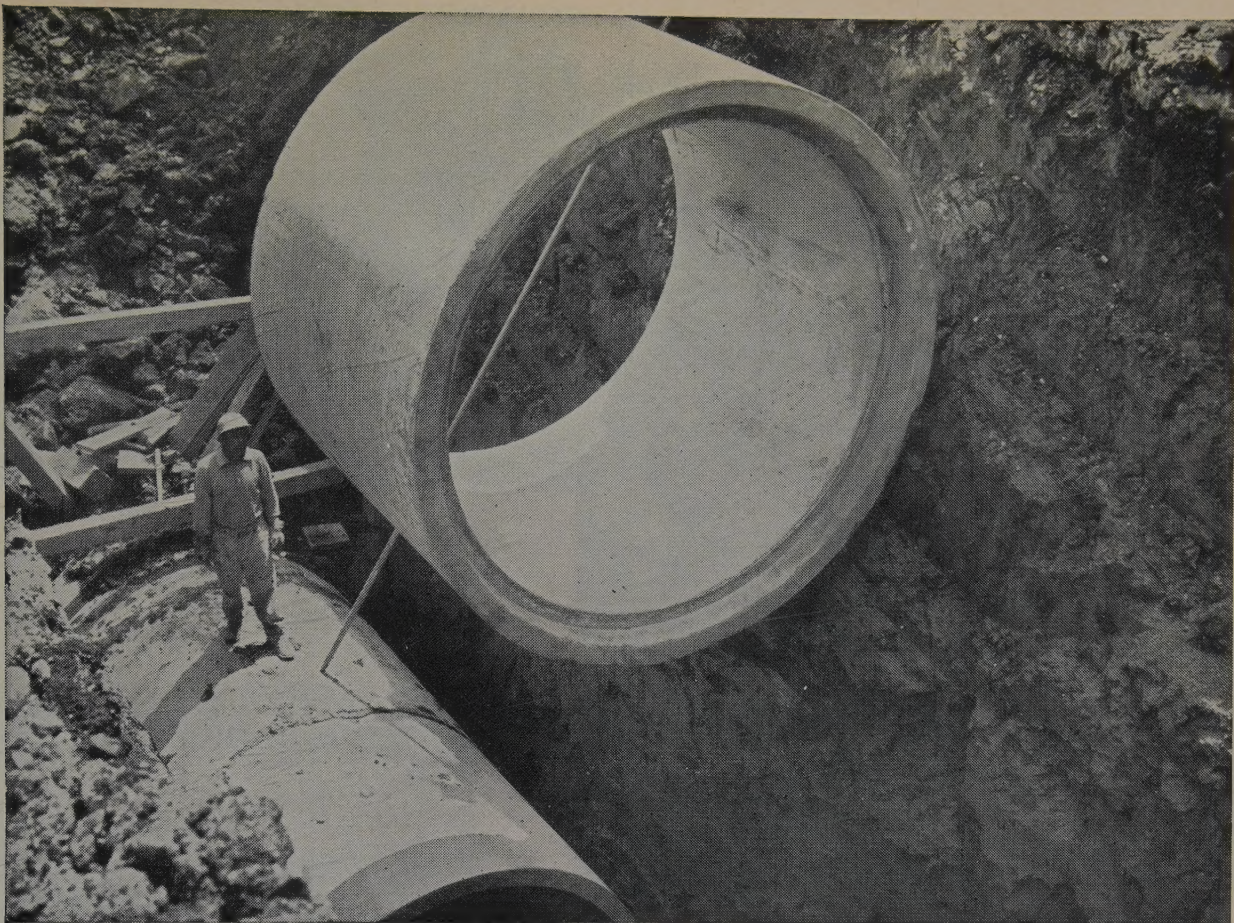
Finally, if you are still with me, these words will doubtless be read by non-members as well as members.

To those of you who are non-members may I say: We need your help also. My hope is that something which has been recorded herein will convince you that ISPE really means to effectively represent engineers of all branches of the profession. If you are a qualified Professional Engineer who has had sufficient interest in your chosen profession to seek registration, we would welcome your cooperation in building a strong profession.

The "Engineers Creed" to which we subscribe as a Society is concluded with this statement:

"In humility and with need for Divine Guidance, I make this pledge."

May each of us exercise the wisdom to seek Divine Guidance in determining the degree to which we will dedicate our time and energy to our profession.



Section of 90" concrete pipe is swung into place easily and quickly

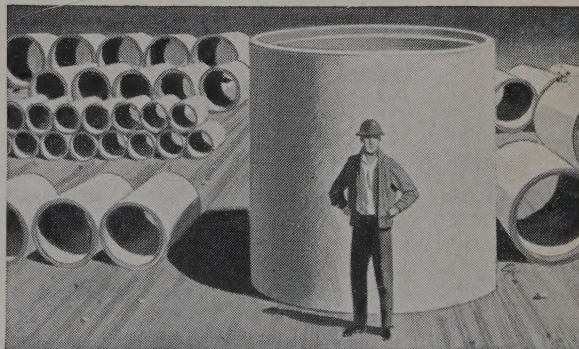
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To alleviate street and basement flooding, Chicago is carrying out a multi-million dollar enlargement of its combined sewer system.

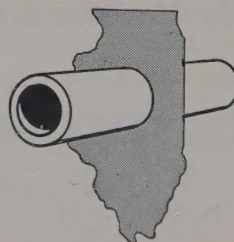
On the new Roscoe Street section, 12,500 feet of concrete pipe, 36" through 90" I.D., was used. Placed deep underground—an average of 27 feet for the 90" size—the pipe carries backfill and traffic load without further support. (A real time and economy advantage, too!) And resistance of the pipe to the overburden will increase because concrete gains strength year by year.

And maximum hydraulic capacity is provided by the smooth inner surface of concrete pipe. It resists abrasive wear. Concrete sewers, too, ensure minimum infiltration and leakage. Match all this with moderate first cost and you see why concrete pipe has a long record of solving difficult sewer problems for hundreds of municipalities.



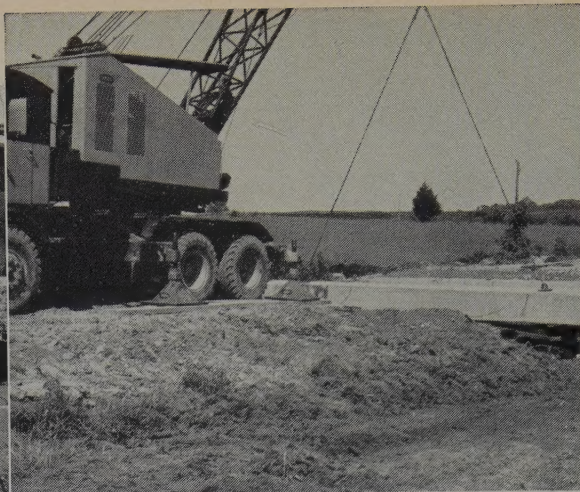
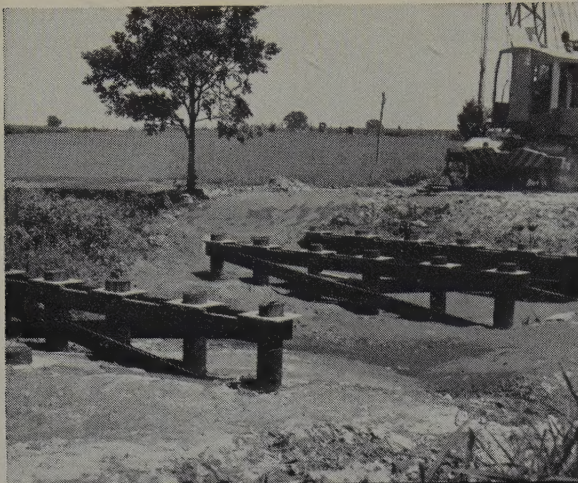
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Features of Nelsen Precast Units:

Span Lengths ... 12' to 40' in standard precast lengths.

Loadings... H15-S12-44 and H-20-S16-44 with or without wearing surface.

Tolerances ... depth $\frac{1}{8}$ "; length $\frac{1}{4}$ " in 10'.

Posts... meet or exceed AASHO requirements.

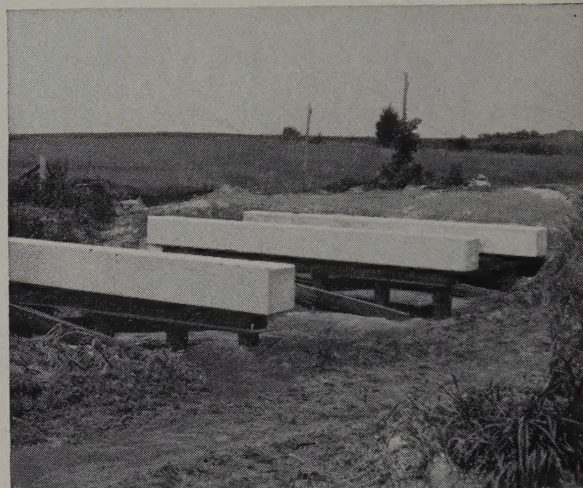
Precast Caps ... dowel holes, crowns, and levelling screws are provided for use with all types of precast caps.

Precast Piling ... 14", 16" in stock; 12" and 18" also available.

Transverse Bridge Slabs ... precast complete with crowns and levelling screws... for long span structures and heavy-duty temporary bridges.

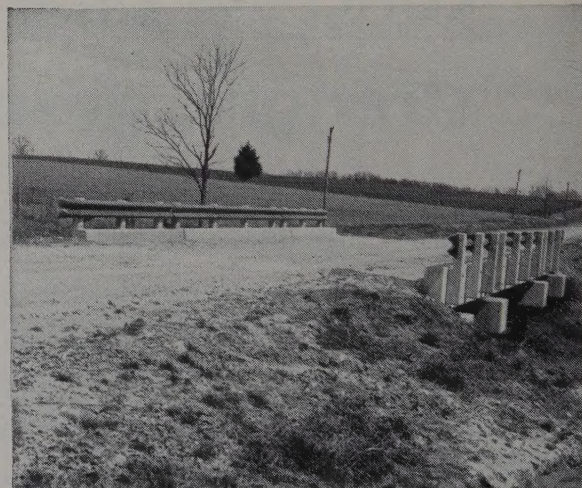
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*Details on request



▲ *Caps in place*

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in the mind of many engineers as to just why they are engineers and where they are going. Then Dr. Logan referred to the White House report on "Education for the Age of Science," which was written, at the request of President Eisenhower, by a select group of scientists. These scientists pointed out that the engineer has the task of combining scientific knowledge with a knowledge of people. He should use the techniques and methods of science to create products for the use of mankind in meeting the needs and desires of all of us. Therefore, the report summarizes that the engineer must have the object of serving mankind. Dr. Logan submitted the proposition that engineers are ignorant of this.

He pointed out that there is always a clamor about the humanities in the engineering curriculum. We need political science and social engineering to be a part of our basic training in order to help map where we are going and why we are going there. This map should not be left to the politician.

It must be emphasized that the technician knows how, the engineers knows why. "This must be proclaimed," said Dr. Logan, "as the engineer's reason for being, and thus attract the bright young men and women that society needs to provide the engineering services of the future."

The next speaker was Frank Edwards representing the consulting field. He pointed out that the canons of ethics are, of course, the ground rules for practicing professional consulting services. Ethics refer normally to moral principles. The canons, however, contain rules of conduct not involving morality. These rules although based on sound reasoning often are misunderstood and application in specific cases sometimes is uncertain. It should be remembered, however, that all applicants for membership in I.S.P.E., and most other engineering societies for that matter, agree to abide by these canons. To disregard the canons after agreeing to them, of course, is wrong. Competitive bidding is one of the items of importance primarily to consultants and the reason for condemning bidding is not understood generally. Competitive bidding is not immoral, but engineers have agreed to follow the ethics, which forbid this practice. The reason for this cause is important. It isn't always understood by industrial purchasing agents. Mr. Edwards cited a letter from an industry that asked for bids on the design of a building. He mentioned that a letter of reply in which the consultant stated his reasons for being unable to fully comply with the agent's request for competitive bids had been returned. The engineer's letter stated that price competition for goods is different, from a product standpoint, from price competition for services. Goods can be tested and if found deficient can be rejected, but engineering thought and skill cannot be measured or compared by price alone.

Further, it is impossible for anyone to write specifications for engineering brains.

It is in the interest of the client and the engineering profession to select the engineer best qualified for the particular project. Mr. Edwards went on to point out that he feels that the overall lower cost of the project is far more important than the engineering fee, which is only a small part of the total project cost. Mr. Edwards further pointed out that he felt that this particular letter pretty well summed up the consultant's stand on the sometimes burning issue of competitive price bidding for engineering services.

Following these three talks, President O'Brien opened the meeting for questions and answers. Among the questions raised was that of the "Turnkey" job. This question was answered by Mr. Edwards, stating that, in general terms, the cost of that type of project would be about 10 per cent engineering and 90 per cent construction. He felt that it was self-evident that in such a case the "tail is not going to wag the dog." Any conflict of interest would probably be resolved in favor of construction expediency. However, Mr. Arenson pointed out that we as consumers do not buy engineering services separately on automobiles. The discussion that followed brought out that, out of an auto, we as consumers do not necessarily get the most operation of the product, rather the most efficient method of production. However, the rebuttal to this was that the most efficient method of production made for an overall cost reduction and made it possible for us to buy an engineering product at a price compatible with our incomes.

Further discussion pointed out that this whole point of services versus products appears to lie in the lack of understanding on the part of the client as to what he needs, and a lack on the part of the consultant in understanding just what position he is supposed to take in relation to his client.

The discussion from the floor also got into Dr. Logan's question of "Why are we engineers?" The question was raised as to why the fledgling isn't taught professionalism, and Dr. Logan and others pointed out that many universities do conduct classes and informal direction of students along this line. However, Dr. Logan pointed out that it is a complex subject and the method of instilling attitudes is difficult. He did point out that Northwestern has started a course in "creativity." He said that it may be possible to question whether or not we can teach creativity. There is no question that it is possible to stultify thinking. Other discussions centered around the question of registration of college professors, and pointed out that in Illinois, especially, it has not become as widely recognized a method as is true elsewhere. The consensus seems to be that I.S.P.E. has a long way to go to achieve this.

PROFESSIONAL CORNER

June 18, 1960

I.S.P.E.:

Enclosed is a copy of a letter from Mr. Lone Reedy concerning the status of the Professional Engineers of Australia. I thought that you might want to use excerpts from this letter in the ILLINOIS ENGINEER. I think that our membership should be made aware of what CAN happen if we attempt to take any "professional" bargaining position with industry.

I know Mr. Reedy quite well. He was a supervising engineer at Caterpillar Tractor Company's Joliet plant, and is now chief engineer of our Australian operation. Lone is registered in Illinois, but he was not a member of our organization.

In view of the fact that I am a member of C. J. McLean's committee for a professional approach to arbitration between employee-employer, I am very interested in this matter. I feel that our membership should be aware of some of the possible pitfalls in this matter.

*Sincerely yours,
Donald J. Larson
R. R. #3, Joliet*

56 Alpha Street
North Balwyn E. 9.
Victoria

Mr. D. J. Larson
R. R. #3
Joliet, Illinois, U. S. A.
Dear Don:

May 30, 1960

I was pleased to receive your letter and to be reassured that the National Society of Professional Engineers in America is continuing to discourage any trend toward unionization among American engineers. As you know, I have always discouraged any thoughts toward unionization for engineers and, now, after having seen the results of that very thing in action here in Australia you may be certain that my feelings have been strengthened many times over.

I mentioned to you in a previous letter that unionization of engineers in Australia has developed through an organization similar to our Society of Professional Engineers in America but somewhere along the line they apparently lost sight of their goals. The "Association of Professional Engineers of Australia" is the organization to which I refer. This association has always maintained that their primary purpose for existence is to enhance the professional status of engineers. They are able to still make that claim today for the simple reason that they, in effect, refer all negotiations for

wages, working conditions, etc., to another society for action. This latter society is the (A.A.E.S.D.A.) Association of Architects, Engineers, Surveyors and Draughtsmen of Australia.

At the present time, then, the A.A.E.S.D.A. is the industrial voice of the Association of Professional Engineers of Australia and there is no legal connection between the two. This method of operation, up-to-date, has permitted the Association of Professional Engineers to accomplish "negotiations" without carrying any of the blame or responsibility. However, they are now going the full distance and are fighting in the courts to be permitted to perform their own negotiations for wages and working conditions, etc. This court case has been going on for many months and it appears that the Association will win the case in the very near future. When this is done then the Association of Professional Engineers of Australia have made the complete change-over from a "professional" association to nothing more than an ordinary union.

I have given these details to help explain just how easily an organization slipped from its very good original intentions to less desirable actions, particularly for engineers.

As I mentioned to you in a previous letter all draughtsmen, engineers, and engineering supervisors in my department are members of this association. Some are less active than others but nevertheless are members and must voice their opinions. In fact, one of my top senior engineers is Vice President of the A.A.E.S.D.A. for the state of Victoria and you can imagine that we are very closely observed and compared with all other engineering departments throughout the state. I have been fortunate (so far) in preventing our company from becoming a "test case" in both the state of Victoria and on a national basis in more than one instance.

I might mention that the "awards" (contracts) that are made for the various trades here in Australia are actually awards made by the courts and not individual contracts with companies. Although our company is, in all cases, equaling the awards and in most cases exceeding them, the association can negotiate with companies individually (under threat of strikes) for more than the awards require, yet they would not be supported by the courts. The purpose for doing this is to eventually get "Averages" throughout the state or nation higher than the court awards so that they can then negotiate through the courts for a higher or improved "Award".

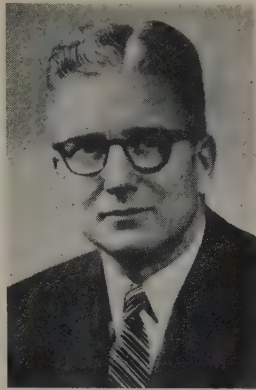
Sincerely,
L. O. Reedy.

**ADVERTISE IN
THE ILLINOIS ENGINEER**

(Continued from Page 4)

It is with regret that I report Illinois took second place in the membership contest in our group of states. Texas regained first place which Illinois wrested from it last year.

Highlights of the four-day meeting included:



Frank Edwards

- (a) approval of an Institute for the Certification of Engineering Technicians to be inaugurated and directed by NSPE.
- (b) Reaffirmation of NSPE support of the functional plan for unity of the engineering profession, and in the light of recent action by two other engineering societies to implement the plan as soon as practicable.
- (c) A report of the new survey entitled "Engineering Professionalism in Industry," now ready for publication by the Professional Engineers' Conference Board for Industry.
- (d) Approval of a public relations program expanded to include production of a film on professionalism.

- (e) Adoption of a suggested plank for the political platforms of the Democratic and Republican parties which would recognize the role of engineering in public welfare.

Several NSPE committees are preparing outlines for suggested chapter meeting programs. The following committees are working on outlines in their respective fields:

Interprofessional Relations	Employment Practices
Ethics	Inter-Society
Public Relations	Engineering Preparation
Legislation	

Announcement was made that Armco is planning to add five additional scholarships next year. This indicates the outstanding success of the Armco scholarship program which has been effective the past two years. A scholarship Foundation, separate from NSPE but controlled by NSPE, will soon be organized to administer scholarship programs.

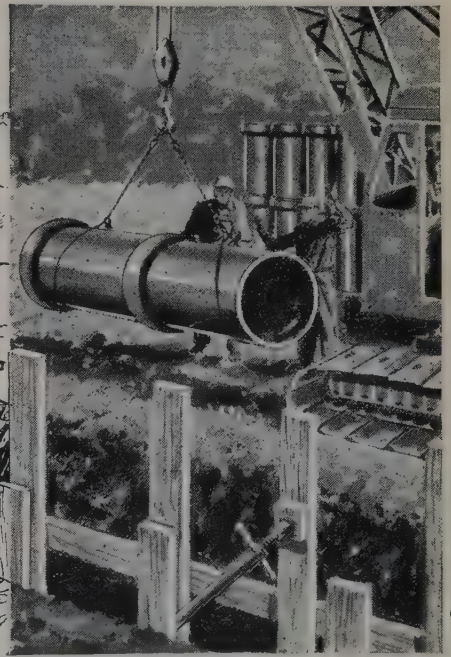
**HAVE YOU ASKED ANOTHER
ENGINEER TO JOIN I.S.P.E.?**

Progress in sanitation



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St. Louis, Mo. San Antonio, Tex. Texarkana, Tex.-Ark.

If it's made of clay it's good . . .
if it's made by Dickey it's better

(Continued from Page 2)

the Civil Service Retirement Act, although Social Security benefits when paid are exempt from taxation, as are the Civil Service benefits to the extent of the employee's contribution. In other words, this bill would start an entirely new principle. At the present time, only the employer's contribution is tax exempt, not the employee's. Under the Keogh-Simpson bill, the total amount or 100 percent, which is set aside would be tax free until it was later received upon retirement."

Bill Introduces Subsidies

"The Treasury and the Eisenhower Administration have been very vigorous in opposing the Keogh-Simpson bill on the ground that its direct immediate cost to the Treasury would be at least \$365 million per year. They point out that there are really two forms of subsidies involved: (1) the fact that the taxes later levied on the annuities would be appreciably less than those originally payable since they would be on lower total incomes and hence subject to a lower rate; and (2) there would be a loss equal to the interest on the money which the Government would have to borrow since it was not received in taxes as it would otherwise be, in the meantime. The Administration has therefore opposed this proposal with all its strength and their Senate floor leader is, of course supporting them. They (the Administration) are charging that to pass the Keogh-Simpson bill would

help to unbalance the budget and be an act of fiscal irresponsibility."

Professional Attentions Strong

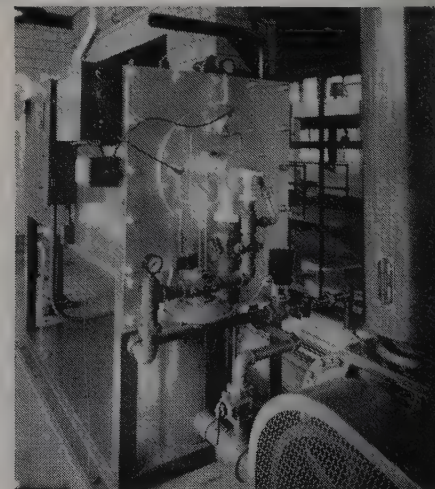
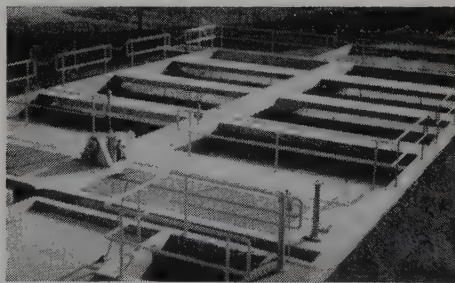
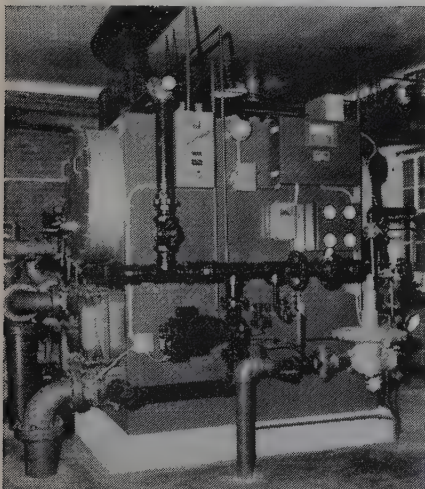
"Since most of the doctors, lawyers, accountants etc., who write me on these matters are also insistent that we should not unbalance the budget, I am sure you and they will want to consider these objectives carefully and if they are well founded would not want me to follow a course of action which would violate these deeply held convictions of the Eisenhower Administration.

"I, however, believe in exercising independent judgment in this as in other matters and, while I will give due weight to the arguments of the Eisenhower Administration and of my colleague, if I find them to be ill-taken, I will vote for some form of the Keogh-Simpson bill even though I am denounced by the Republicans for doing so."

Many Interests Involved

"There are other developments which I believe you should know about. If it seems probable that the Senate will adopt this measure, then numerous groups are already organizing to demand that a similar privilege be extended to them, namely: (1) employees of the self-employed professional men such as receptionists, stenographers, typists, clerical assistants, technicians, etc.; (2) executives in companies which do not have pension plans; (3) workers in companies without plans; (4)

WALKER PROCESS engineers and manufacturers of equipment for ... water, waste and sewage treatment



Some of the Walker Process installations in Illinois:
Left—HEATX, digester sludge heater at Urbana-Champaign; Wilson & Anderson, Consulting Engrs.
Top—Rectangular Collectors at Morris; Baxter & Woodman, Consulting Engrs.
Right—CARBALL, CO₂ producer at Moline; Greeley & Hanson, Consulting Engrs.

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se workers in companies with private plans who do
ake contributions; (5) Social Security insured per-
ns, and (6) Civil Service employees. The case for the
ter two groups will of course be weaker than for the
ers for the reasons mentioned. But what is likely
happen is a wholesale application of the plan which
ll cost the Treasury much more than the estimated
iginal figure. The Treasury estimates the revenue
ss if other groups are brought in as \$3 billion—pre-
mably on an annual basis.

"In short, let me say that I am studying this pro-
osal both carefully and sympathetically, and that I
ill not be rushed off my feet by the opposition of the
isenhower Administration."

New Proposals Coming

"Now, we have fresh new counter-proposals in this
eld emanating from the Administration. In general,
ese would apply the same principles to self-employed
ans as now apply to those of corporations with respect
oth to coverage (i.e., all employees of self-employed
ersons would have to be included) and to the amount
o be exempt from taxation (i.e., the one-half which is
e employer's contribution.)

"I am examining these counter-proposals with great
interest although with a slightly critical mind. I hope
ou will not object to this attitude on my part.

/s/ Paul H. Douglas"

EMPLOYEE-EMPLOYER RELATIONS COMMITTEE NAMED

ISPE has taken another constructive step in the field
of Employer-Employee Relations. A special committee

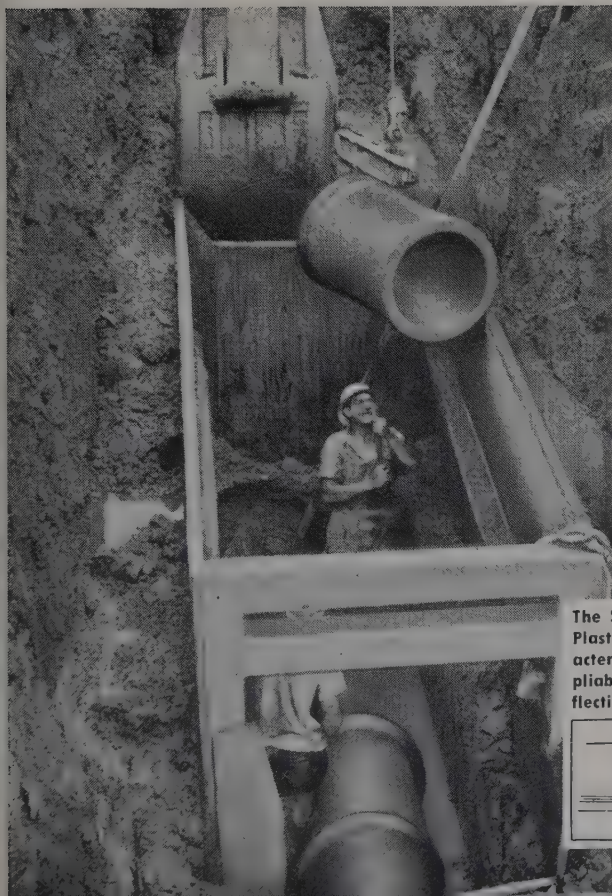
was appointed on June 4
to deal with the problem of
devising a professional ap-
proach to arbitration be-
tween employees and em-
ployers for engineers. This
committee is composed of
three prominent profession-
al engineers, headed by C. J.
McLean, P.E., with Com-
monwealth Edison Com-
pany, as chairman. Other
members are Donald L. Ar-
enson, P.E., with American
Machine and Foundry Company and Donald J. Larson,
P.E., with Caterpillar Tractor Company.



C. J. McLean

This special committee has been established, not to
deal with a current problem, but rather to prepare the
Society to aid its members in meeting a possible future
situation. This action is another example of the for-
ward-looking attitude of the Society in accepting its re-
sponsibilities for professional development and of in-
dividual member service.

No Slowdown-No Costly Delays with Streator's New Amvit Joint



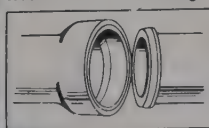
Even in the wettest of trenches, when high
ground waters and muddy conditions gener-
ally mean costly delays—completely water-
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Low transportation costs assure best values
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The Streator New Amvit
Plastic Joint has the char-
acteristics of rubber, is
pliable, and allows de-
flection without leakage.



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SINCE 1907



STRUCTURAL ENGINEERS REPORT

The Functional Section for Registered Structural Engineers had its annual meeting in Springfield at the time of the Annual Convention. The well planned and tightly packed two and one-half hour program was enthusiastically received by the eighteen members in attendance.

Chairman Roland Olson called upon Louis Bacon to explain the relative position of State Functional Sections with the rest of the Society. To more clearly express this relationship, Mr. Bacon used an organizational chart which indicated the Functional Sections on a level with the State Committees and directly tied to the Board of Directors. The chart also gave the local chapter set-up with Functional Committees. These committees can function much the same as any other chapter committee; refer items to the local executive committee for action or referral to the State Board, or they can contact the appropriate State Functional Section with their request.

Mr. Olson announced that a Functional Committee for Registered Structural Engineers had been formed in the Chicago Chapter. He introduced the founders and co-chairmen of this committee, Elmer Major and Ingvar Schousboe, and he asked Mr. Schousboe to tell how and why such a committee was formed. Mr. Schousboe explained that for the first meeting the mailing list was taken from the State Functional Section membership list plus any that had indicated an interest in structural engineering in the recent Functional Section questionnaire. They sent 68 invitations and 33 replied. Of these, 28 said they would attend. Actually, 23 attended the meeting and were very enthusiastic about the possibilities.

Mr. Schousboe and the Chicago committee offered the following thoughts to other groups thinking of getting started:

1. Such committees are a source of leg-workers for the State Functional Section.
2. Local committees should have about four meetings per year.
3. Local committees need direction from the State Functional Section as to what items to work on so that there is not too much overlapping or duplication.
4. Local committees should originate some ideas and send them to the State Section for spearheading.

Mr. Bacon reported on the activities of the Chicago Chapter Ethics and Practice committee during the past year. He dwelt mostly on the items involving Structural Engineers.

He mentioned that they had used a sub-committee of seven Structural Engineers to make discreet personal calls on 45 apparent violators of the Structural Engineer's Act. Out of this, four strong cases have been referred to the Department of Registration and Education.

The Chicago group is sending 2,000 questionnaires

to all Contractor-Engineer listings in the telephone directory, and they have just sent 500 follow-up questionnaires to the straight engineer listings.

Mr. Bacon also mentioned, in general terms, several cases involving Structural Engineers that are still under investigation, have been referred to the State Ethics and Practice Committee, or have been referred to the Department of Registration and Education.

He urged all members to insist that their local Ethics and Practice committees become ACTIVE and to see to it that a few members are registered Structural Engineers.

Mr. Olson introduced Mr. John Gnaedinger who spoke on soil engineering and why it is a branch of structural engineering and should not be under the Professional Engineer's Act. He pointed out the complicated and unknown items involved in foundation engineering, such as evaluating data, classifying a material that varies from spot to spot on the same lot, and reaching conclusions that aid in the selection of the type of foundation and allowable bearing pressures.

Mr. Gnaedinger commented that many registered Structural Engineers will hire well drillers or chemists to do their soils work (make borings, analyses and recommendations) and not realize the danger of placing this responsibility in unregistered persons. But apparently many structural engineers are blind to this danger. Some day the structural engineers should all realize that the determination of the bearing pressure is just as much a structural engineering act as the designing of the footing. The man who does this work may be qualified to do one and not the other, or in some cases he may be qualified to do both.

Mr. Olson gave a definition of a building code and then proceeded to give the history of some ancient building codes. He cited several current examples of outdated codes and he urged that our Section start a movement in the Society to offer our services to municipalities in modernizing their present codes or to assist them in adopting a code.

The group voted on several suggestions relative to possible legislative changes, participation on state committees by our members, and the practices of certain State of Illinois Departments relative to the registration act requirements. These items were referred to the Board of Directors at their meeting of May 7th and all received favorable action and were referred to the appropriate committees for study.

The following officers were elected for the current year: John Gnaedinger, Chairman; Marcus Rice, Vice-Chairman; Louis Bacon, Secretary-Treasurer; Tom Gazda, Committeeman; Roland Olson, Committeeman.

The membership of the Section now stands at 78. If you're a registered Structural Engineer and would like to be a member of this Functional Section, just drop a note to the Secretary or to Society headquarters.

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INDEX OF ILLINOIS ENGINEER ADVERTISERS, 1960

lyord, Burdick & Howson.....	16
meo Drainage & Metal Products, Inc.....	
ustin Engineering Company.....	16
eling Engineering Consultants.....	16
omer L. Chastain & Associates.....	16
ark, Daily & Dietz.....	16
onsoer, Townsend & Associates.....	16
arry H. Cordes.....	16
rawford, Murphy & Tilly.....	16
rescent Engineering Co., Inc.....	15
harles N. Debes, Associates, Inc.....	16
eLew, Cathor & Company.....	16
alter E. Deuchler Associates, Inc.....	16
ickey Clap Pipe Company.....	11
alter H. Flood & Company.....	15
riedewald Engineering Co.....	16
oodkind & O'Dea, Inc.....	16
reeley & Hansen.....	16
harles W. Greengard Associates.....	16
anson, Collins & Rice.....	Inside back cover
arza Engineering Company.....	Inside back cover
azelet & Erdal.....	Inside back cover
linois Concrete Pipe Association.....	7
linois National Bank of Springfield.....	15
enkins, Merchant & Nankivil.....	Inside back cover
aclair Asphalt Co., Inc.....	15
autz & Oren, Inc.....	15
ational Survey Service, Inc.....	Inside back cover
elsen Concrete Culvert Co.....	8
ortland Cement Association.....	Back cover
. W. Robinson & Associates.....	Inside back cover
ock Island Steel Division Macomber.....	15
ussell & Axon.....	Inside back cover
argent & Lundy.....	Inside back cover
. C. Saunders.....	Inside back cover
. C. Seiberling.....	Inside back cover
ilander & Son.....	Inside back cover
skokie Valley Asphalt Co., Inc.....	15
oil Testing Services, Inc.....	Inside back cover
tanley Engineering Company.....	Inside back cover
treator Drain Tile Company.....	13
verdrup & Parcel Engineering Co.....	Inside back cover
niversal Automatic Engine Controller.....	15
alker Process Equipment, Inc.....	12
ight & Company.....	Inside back cover
. K. Willett.....	Inside back cover

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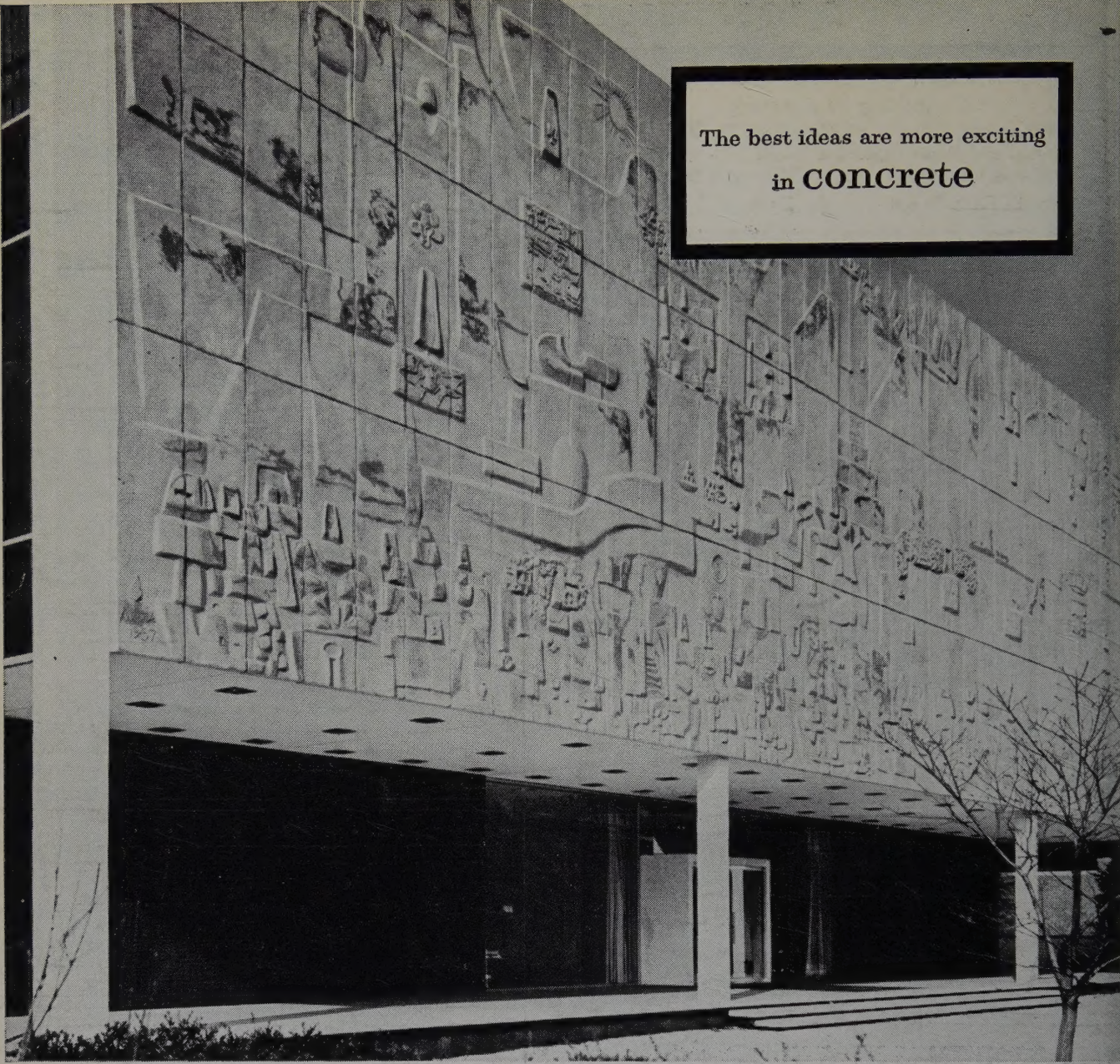
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To achieve the striking design effect pictured here, the architects chose precast concrete. With it they turned the fronting wall of the building into an heroic bas-relief.

Famed sculptor Costantino Nivola "carved" the designs in damp sand. Cast directly from these sand molds in 132 panels, the concrete captured all the detail and rich texture of the original sculpture. Color variations on buff-toned background increase the feeling of depth.

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